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1 Introduction

This paper is a sequel to my earlier paper Nishida 1996, but concentrates on a more specific topic than I did in that paper. The purpose of this paper is to analyze predicate nominals in terms of grammatical number. I will argue that the grammar of predicate nominals has two aspects with respect to number. On the one hand, their number is determined to be singular with exclusive reference to the meaning of the indefinite article. On the other hand, their number is determined in relation to the number of subject NP's. This is called number concord. Typical examples include the following:

(1) a. They are {teachers/*a teacher}.
    b. Ed was {a lawyer/*some lawyers}. (Huddleston 1984:186)

As is argued in what follows, the concord phenomenon has much to do with the layered structure of noun phrase reference. I will demonstrate that there is a mechanism that underlies the selection of plural versus singular NP's as a predicate nominal. In the earlier paper I have referred to the phenomenon in relation to the predicational (PR) and specificational distinction of copular sentences. Since I have employed the phenomenon to characterize one of the distinctive grammatical properties of PR sentences, the onus is on me to demonstrate how it occurs in the context of a PR sentence.

Before going into the detail of the mechanism of concord, we have to take into consideration two aspects of a predicate nominal that must be kept apart. Predicate nominals are generally characterized as expressions of a property. I maintain that it is one thing for a predicate nominal to work as an expression of a property and it is another for it to work as an expression of the property of some referent(s). The former is related to its status as a predicate and the latter is related to its status as a participant in a predication. To the best of my knowledge this difference in status has never been made explicit in previous analyses, but I will show that linguistic facts weigh in favor of this position. In this sense this paper has two major aims. First, we will consider the predicate status of a predicate nominal, focusing on its singularity guaranteed by the indefinite article. Second, we will examine the role of a predicate nominal in a wider perspective of predication. Although the integration of these two topics is relegated to further study, I will suggest that the two aspects of a predicate

nominal be analyzed in terms of grammatical number.

A number of grammatical phenomena are shown to be sensitive to the distinction between what I call a referring expression of a referent and what I call a conceptual expression of a property. This distinction applies to the indefinite article and its various aspects are described in terms of the contrast between reference and concept. The indefinite article of a singular predicate nominal is what shows best how the distinction works. One might say that the indefinite article in this position is too trivial to deserve a linguistic analysis. Indeed, we sometimes encounter a lackadaisical attitude toward this article that just says that it is a meaningless particle, but I think it is of much importance when it is viewed from a general theory of predication. As will be seen, this paper is written in close accordance with the thrust of Burton-Roberts' original remarks. For the basic analysis of the indefinite article I will take a hint from Burton-Roberts 1976, 1977, who takes *a(n)* as expressing a concept rather than an object when it determines an NP in predicative position.

The discussion touches on topics as diverse as concord phenomena, free relatives, and tautologies, but the main point of this paper is to show that the conceptual facet of the indefinite article is independent of the numerical sense of 'one' that the specific and non-specific facets of the article have. This paper is organized as follows. In Section 2 a recapitulation of the previous analyses is made with respect to the grammar of *a(n)* of a singular predicate nominal. In Section 3 we will pursue the idea that the meaning of the indefinite article in question is best captured via the grammatical parallelisms with the indefinite article in generic use. Indefinite generic sentences will be shown to have a close connection with predicates consisting of a predicate nominal. The key claim is that the connection stems from the status of a predicate nominal as an expression of a property. Section 4 is devoted to the analysis of the concord phenomenon. From a point of view of predication a predicate nominal is not just an expression of a property, but is made to reflect the interpretation of subject NP's. We will argue that noun phrase reference has a layered structure in itself, and that an intermediate level postulated to lie in between a property and a referent plays an important role in determining the singular/plural contrast of predicate nominals. Section 5 offers concluding remarks.

2 Previous Analyses

I focus on the indefinite article of singular predicate nominals, and try to

show that it has a positive contribution to the semantics of PR sentences. Evidence will be presented which suggests that the indefinite article in this position has much to do with the indefinite article in generic sentences. In conformity with the terminological practices of Burton-Roberts 1976 I call the former COP *a* and the latter GEN *a*, and further refer to the article used specifically as +SPEC *a*, and that used non-specifically as -SPEC *a*. COP *a* is so called because it is associated with NP's that stand in complement position of copular verbs like *be*. It has a special status in the grammar of the indefinite article. It differs considerably from the other uses of *a(n)* except for the striking parallelisms with GEN *a*. The whole argument of this paper hinges on how we make sense of the parallelisms.

Standard analyses of the indefinite article have employed the threefold division of *a(n)*. Takeda 1981 classifies indefinite NP's into three types, namely specific, non-specific, and descriptive types. Takeda classifies NP's in generic use as being descriptive. In this paper I do not embark upon such a big project of the definition of specificity, but in the course of discussion, it will be shown that there is an important difference between +/-SPEC *a* and COP/GEN *a* with respect to the distinction between a referent and a property. I believe that we can come to a better understanding of specificity indirectly by the analysis of COP *a*, because it contrasts with +SPEC *a* in many essential respects.

It should be stated at the outset that we confine our attention to the GEN *a* that occurs with NP's in subject position for just expository purposes. In fact, it is a moot point whether the distribution of GEN *a* is limited to NP's in subject position or not. One more caveat. This paper is highly tentative and leaves the account unformulated. It will have succeeded in its purpose if it leads to the conviction that the grammar of COP *a* is rich with implications for predication theory and we must approach it from a multi-dimensional perspective.

2.1 Predicate nominals

Let us begin by summarizing some of the grammatical properties that distinguish COP *a* from the other uses of the indefinite article. First, as Kuno 1970 points out, NP's determined by COP *a* (predicate nominals) are compatible with nonrestrictive relative clauses introduced by *which*, but not *who*, even when they describe human beings.

(2) He is a gentleman, {which/*who} his brother is not.

Indefinite NP's describing human beings are compatible with nonrestrictive

relative clauses introduced by *who* when they are determined by +SPEC *a*:

(3) They threw him out for shouting at a woman, who tried to pick him up.

This difference in the choice of relative pronouns implies that COP *a* differs from +SPEC *a* with respect to referentiality. In other words, NP's determined by COP *a* do not pick out a particular referent as a human being.

Second, an NP determined by +SPEC *a* may be paraphrased into *a certain N*, but this paraphrase is impossible with COP *a*.

(4) a. A (certain) whale struck a ship.
b. *John is a certain scientist.

As Enç 1991 has argued in detail, the paraphrase is quite shaky and not systematic at all. However, it is equally true that the familiar paraphrase gives us some insight into the heterogeneous nature of the indefinite article and I just assume the generally accepted paraphrase with serious doubt in mind.

Third, NP's determined by COP *a* fail to establish a discourse referent in the sense of Karttunen 1976, since they denote a property and have no referent in the universe of discourse.

(5) a. A doctor came to see me. I could trust {him/the doctor}.
b. My brother is a doctor. I cannot trust {him/*the doctor}.

(Kuno 1970:356)

Since they are non-referential, NP's determined by COP *a* can be repeated with different subjects, but referring expressions, though they are in similar environments, cannot be repeated in this way:

(6) a. Peter is a teacher, and Lisa is a teacher, too.
b.??Peter is the teacher, and Lisa is the teacher, too.

(Holumberg 1993:130)

These differences in behavior indicate quite strongly that the grammatical properties of COP *a* cannot be stated in terms of referential presupposition or specificity, since it does not refer to a particular object. As a first approximation we can say that it is related to something conceptual rather than concrete. This line of inquiry is what this paper is all about.

Three kinds of analyses have been proposed on the nature of COP *a*. These analyses are called 'meaningless', 'unitary', and 'heterogeneous' analyses, respectively. As the attentive reader will have recognized, the present discussion is reminiscent of the discussion that I made in the earlier paper with respect to copular *be* (Nishida 1996). Grammatical analyses of a functional

word in general boil down to three kinds: these are analyses that state (i) that the word is essentially meaningless, and it has just syntactic functions, or (ii) that the word has a single abstract core meaning, and its multiple uses can be reduced to the abstract core, or (iii) that the word has several meanings and its multiple uses can be derived from the interaction of the meanings. In this paper, as I did in the earlier paper, I will defend and practice the third type of analysis with respect to the indefinite article.

2.2 'Meaningless' analysis

Let us begin by reviewing what the 'meaningless' analysis has to say about COP *a*. Representative articles include Takeda 1977 and McCawley 1988. This theory has the virtue of simplicity, but it is too simple to describe linguistic facts properly. Faced with the fact that COP *a* is obligatory for a singular predicate nominal, proponents of this analysis say that it is required to occur simply because nouns like *teacher* are singular count nouns.

(7) He became *(a) teacher.

In other words, they say that COP *a* functions as a singular marker without inherent semantics, period.[1] On closer examination, however, the analysis turns out to be inadequate. Doron 1988:295 observes that there are cases where COP *a* plays a key role in the interpretation of copular sentences:

(8) a. John is a vice-president of the club.
b. John is vice-president of the club.
c. John is the vice-president of the club.

The presence or absence of COP *a* yields a striking difference in interpretation. With *a*, the sentence in (8a) is a PR sentence, but without *a*, the reading of the sentence in (8b) is much closer to that of the descriptionally-identifying sentence in (8c). The sentences in (8b-c) imply that John is the only person who occupies the post of vice-president of the club, but such a reading is not available in (8a). If COP *a* would just be a meaningless particle, why it can induce such a difference in semantics? When predicate nominals include nouns denoting institutional roles such as *captain*, *king*, *president*, and *queen*, the difference in interpretation shows up with respect to the uniqueness or distinctiveness of the person who plays the role. Consider the sentences in (9):

(9) a. He'll never make a captain -- he lacks the qualities.
b. He'll never make captain -- he lacks the qualifications.
(Bolinger 1980:1)

With *a*, *captain* describes one's qualities. Qualities are the sorts of things that

are inherent in one's properties. Without *a*, *captain* means one's qualifications. Qualifications are the sorts of things that are determined in relation to the status or rank that one has in society. The post of captain is occupied by only one person in a given group of people. This reading is blocked by the presence of COP *a* just because it has some sense to go against the reading. At the same time, this contrast suggests that COP *a* is something more than a mere singular marker and that it has something that describes one's internal properties. In Section 3 I will explore what that is on the basis of the parallelisms between COP *a* and GEN *a*. In view of these facts we are led to the conclusion that the 'meaningless' analysis is too hasty to accept as a descriptive device of COP *a*.[2]

2.3 'Unitary' analysis

Next we are going to argue whether it is feasible to support the 'unitary' analysis of the indefinite article. It is a matter of historical fact that the indefinite article *a(n)* is traced to the numeral *one* in its origin. Even today, there are a number of overlappings between the two determiners. As is described by Quirk et al. 1985:273-274, the numerical function of the indefinite article is obvious whenever it occurs with numerals, as in (10):

(10) a. a mile or two (cf. one or two miles)
b. The Wrights have two daughters and a son.

Against this background, Perlmutter 1970 has proposed that the essence of the indefinite article is the numeral *one*, and that *a(n)* is transformationally derived from *one*. However, it is easy to point out the fundamental difference between *one* and *a(n)* with respect to the distribution of COP *a*.

As Perlmutter himself admitted, the reduction of *a(n)* to *one* is not always possible and this theory fails to describe the distributional differences among various uses of the indefinite article. One notable example is the indefinite article in generic sentences like:

(11) a. A beaver builds dams.
b. One beaver builds dams.

While the sentence in (11a) is a generic sentence, the sentence in (11b) is not. (11b) is rather a statement about a particular beaver. Thus, the reduction of *a(n)* to *one*, at least in the case of generic sentences, is not possible. Interestingly, predicate nominals do not accept the reduction, either.

(12) He's {a/*one} doctor. (Perlmutter 1970:238)

In this analysis, it would be totally unclear why the reduction is blocked in the cases of GEN *a* and COP *a* despite the fact that they are singular in

grammatical number. These facts seem to argue against the 'unitary' analysis of the indefinite article, let alone the reduction to *one*.

Logically speaking, there has been a recurring idea that the indefinite article is a kind of existential quantifier. In this vein Quine 1960:118 interprets the sentence in (13) as meaning that the indefinite NP *a lamb* is identified as Agnes, a particular lamb in the world.

(13) Agnes is a lamb.

This is tantamount to saying that the indefinite NP has some referent that is identified as Agnes on the assumption that the indefinite article in the predicate nominal plays the role of existential quantifier. If we translate this interpretation into a logical symbolism, we get the following:

(14) (For some lamb x) (Agnes = x)

However, as McCawley 1988:441 argues against Quine, it is possible to translate +SPEC *a* into the following paraphrase by an existential sentence, in which it functions as existential quantifier, but as far as COP *a* is concerned, it is not possible to do so. The sentence in (15a) yields the paraphrase in (16a), but the sentence in (15b) does not yield that in (16b):

(15) a. John didn't talk to a friend of mine.
b. John isn't a friend of mine.

(16) a. There is a friend of mine that John didn't talk to.
b. There is a friend of mine that John is not.

COP *a* does not allow the interpretation based on existential quantification and McCawley 1988:441 himself takes COP *a* to be "semantically empty."

At this juncture, it is necessary to observe that NP's determined by GEN *a* also reject this interpretation based on existential quantification:

(17) a. A beaver is an amphibious rodent.
b.??There is a beaver which is an amphibious rodent.

(Takeda 1977:44)

These facts go against the basic tenet of the 'unitary' analysis, namely that a given lexical item should be analyzed as having a unitary semantics when it allows a unified interpretation if not a unified pattern in distribution. Thus we can conclude that the 'unitary' analysis of the indefinite article is unsuited to the proper description of the linguistic facts.

3 A grammar of COP *a*

I have argued so far that the 'meaningless' and the 'unitary' analysis are

both untenable for a proper analysis of COP *a* on syntactic and semantic grounds. We are going to examine some of the possibilities inherent in the third analysis of the indefinite article, namely the 'heterogeneous' analysis. The basic claim of this analysis is that the indefinite article is heterogeneous in nature and contains several elements. We have seen that COP *a* contrasts with +SPEC *a* in many ways. I have argued that COP *a* has something to contribute to the meaning of the sentences in which it appears. The semantics of +SPEC *a* can be described in terms of existential quantification, but the semantics of COP *a* if any cannot be described in this way. What then does it mean? In this section I will clarify the link between COP *a* and GEN *a* in order to reveal its meaning.

3.1 GEN a *and COP* a

Burton-Roberts 1976 has proposed to transformationally reduce GEN *a* to COP *a*, and claimed that the two uses of *a(n)* are essentially the same. In the first place, consider the following sentences which are nearly synonymous:

(18) a. A whale is a mammal

b. To be a whale is to be a mammal.

Infinitive structures like (18b) contain two predicates without overt subject, and (18b) is interpreted as meaning that 'to be a mammal' is predicated of 'to be a whale.' Given that this interpretation also holds for (18a), she proposed to derive generic sentences like (18a) from (18b) by deleting *to be* in the first infinitive and the finite *is*, and then by finitizing *to be* in the second infinitive. She tried to put NP's determined by GEN *a* on a par with NP's determined by COP *a*. Since an NP determined by COP *a* is part of a predicate, an NP determined by GEN *a* is a predicate in the guise of an NP.

Technical details aside, the most important thesis of her paper is that a predicate is a concept and that a predicate nominal as a constituent of a predicate is also a conceptual expression. It follows from this thesis that generic sentences like (18a) are conceptual rather than referring expressions. After more than twenty years her theory of the indefinite article still remains to be radical in that, despite the abundance of counterexamples and inconsistencies, it attempts to characterize what COP *a* means. We should think much of her proposal.

I will argue that the relation between GEN *a* and COP *a* follows from the key claim that a predicate nominal qualifies as an expression of a property when it is characterized as a predicate. A property is the concept that defines

an abstract category. The predicate is a grammatical reflex of this concept. When embedded in the context of predication, a property expressed as a predicate serves to define what a referent in subject position is. It is important to see that a referent and a property, though interrelated to each other, are independently conceived of. This is illustrated in (6a), in which a property is repeatedly predicated of different referents. We can further argue that a linguistic expression of a property is singular in number: we can abstract a common property from various referents just because a property has a conceptual unity. When we say that a predicate nominal denotes a property, we imply that it is singular in number. This characterization of a predicate nominal holds as long as we focus on its status as a predicate. We must introduce a separate treatment when we approach it from the viewpoint of predication in which it works as an expression of the property of some referent(s), as I will argue in Section 4.

Burton-Roberts offered several arguments to justify the claim that GEN *a* is in fact COP *a*. We will review the core part of her argument. COP *a* does not accept the paraphrase by *a certain*, and neither does GEN *a*.

(19) a. John is a (*certain) scientist.

b. A (*certain) whale is a mammal.

As was mentioned above, predicate nominals do not introduce new entities into the universe of discourse, and they carry no specificity. Similarly, Karttunen 1976:366 observes that one cannot refer back to the indefinite generic NP in subject position of the following sentence as "the lion who is a mighty hunter."

(20) A lion is a mighty hunter.

NP's determined by GEN *a* are similar to NP's determined by COP *a* in that both do not carry specificity. Moreover, in both cases the reduction of *a(n)* to *one* results in unacceptability. This indicates that the nature of GEN *a* cannot be described in terms of the numerical sense of the indefinite article. Unlike +SPEC *a*, and just like COP *a*, it has no power of existential quantification.

A comparison between NP's determined by COP *a* and bare plural NP's in 'generic' use is interesting in this connection.[3] Consider the contrast in (21):

(21) a. Beavers and otters build dams.

b. *A beaver and an otter build dams.

Bare plurals in 'generic' use can be coordinated by *and*, but NP's determined by GEN *a* cannot be coordinated in this way. There is a crucial parallelism between GEN *a* and COP *a* in this respect:

(22) *To be a beaver and to be an otter are to build dams.

(Burton-Roberts 1976:437)

But both GEN *a* and COP *a* readily accept the disjunctive coordination by *or*:

(23) a. A beaver or an otter builds dams.

b. To be a beaver or to be an otter is to build dams.

(Burton-Roberts 1976:437)

And contrasts with *or* in that NP's coordinated by *and* is plural in number but those coordinated by *or* is singular, as is evident in (24):

(24) a. John and Mary are happy.

b. John or Mary is happy.

NP's determined by GEN *a* and infinitive structures containing a predicate nominal are both singular in grammatical status. I argue that their singularity stems from the conceptual unity of a property. They do not mesh with the coordination by *and* that requires that the coordinated NP's be plural in number. They mesh with the coordination by *or*, for it guarantees that the coordinated NP's are singular in number. The central claim of Burton-Roberts is that both COP *a* and GEN *a* are part of conceptual predicate. This reduction to predicate enables her to account for the parallelisms between COP *a* and GEN *a*. She then goes so far as to formulate a derivation from (18a) to (18b).

3.2 A critique of the reduction

These parallelisms are suggestive of a certain relationship of GEN *a* to COP *a*, but we cannot trace the relationship derivationally. As Seppänen 1984 has argued in detail, the analysis by Burton-Roberts cannot be sustained as it stands in view of the fact that there is a large body of data that militate against it. Let us summarize what Seppänen has said in opposition to her analysis.

First, it is not always possible to reduce a GEN *a* to a COP *a*, as in:

(25) a. A mistake is always regrettable.

b.?*To be a mistake is to be regrettable. (Seppänen 1984:105)

Conversely, it is not always the case that COP *a* is consonant with GEN *a*:

(26) a. In the 1970's, to be a radical was to make new headlines.

b. In the 1970's, a radical made new headlines.

Seppänen 1984:106 says of the sentences in (26) that (26a) receives a generic interpretation, but (26b) does not.

Second, there is a difference in the choice of nonrestrictive relative pronouns. NP's determined by COP *a* are followed by *which* and not *who*.

(27) He is a gentleman, {which/*who} his brother is not.

However, NP's determined by GEN *a* are compatible with nonrestrictive relative clauses introduced by *who* when they describe human beings.

(28) A bachelor, who in those days normally lived with his parents, had no life of his own. (Seppänen 1984:103)

This difference may be traceable to the difference in referentiality between NP's determined by COP *a* and those determined by GEN *a*. The former have no referent, but the latter have some 'referent' in somewhere.

Third, there is a difference in anaphors between the infinitive structure with a predicate nominal and the generic sentence:

(29) a. To be a baby is to cry when one is hungry.
b. A baby cries when it is hungry. (Seppänen 1984:107)

In the case of the infinitive structures, the subject in the subordinate clause is controlled by the understood subject of the infinitives. In (29b) the subject in the subordinate clause is anaphoric to the generic NP. Since overt subject NP's are absent in the infinitive structures, the reflexive form *oneself* occurs to be controlled by the understood subject *one*.

(30) a. To be an egotist is to think only of oneself.
b. An egotist thinks only of himself. (Seppänen 1984:107)

NP's determined by GEN *a*, however, 'refer to' something in their own right, and so they take the anaphors. Here again we have some reason to believe that COP *a* and GEN *a* differ with respect to referentiality.

The understood subject *one* has much to do with the acceptability of the infinitive structure. *One* basically describes a human being, and thus textbook examples of the infinitive structure are concerned with animate entities. Infinitive structures are very awkward when they talk about inanimate entities.

(31) a. A philatelist collects stamps.
b. (For one) to be a philatelist is to collect stamps.

(32) a. A chimney may be quite tall.
b.?*(For one) to be a chimney may be to be quite tall.
(Seppänen 1984:104-105)

(32b) is bad because the understood subject *one* is incompatible with the predicate *to be a chimney*. The same applies to the unacceptability of (25b) (**for one to be a mistake...*). *To be a mistake* is not a predicate for a human being. A transformational derivation that has to take into account the semantic or pragmatic notion of (in)animateness is no transformational derivation at all.

These facts might appear to argue that there is no such thing as a

derivation to connect COP *a* to GEN *a*. In fact there is no such derivation and it is impossible to derive GEN *a* from COP *a* by transformational rule. It is nevertheless worthwhile to explore what the parallelisms if superficial mean in this context, because in my opinion the analysis developed by Burton-Roberts seems to provide a key to the semantics of COP *a*.

3.3 The singularity of COP a *and the singularity of GEN* a

Differences in form will accompany differences in meaning. As the contrasts in (33) and (34) indicate, there is a qualitative difference between generic sentences with GEN *a* and 'generic' statements made by bare plurals.

(33) a. Owls are {common/extinct}.
b. *An owl is {common/extinct}.

(34) a. Beavers are increasing in numbers.
b. *A beaver is increasing in numbers. (Ikeuchi 1985:83)

Bare plural NP's present no problem when they are associated with predicates expressing a property that is attributed to plural entities like a group and a kind. NP's determined by GEN *a* do not, however, occur with such predicates. They are semantically as well as formally singular. To put it more precisely, the generic sentence with GEN *a* is used to predicate of a singular entity the property that inheres in that entity itself. Here the term 'singular' gains two interpretations with respect to GEN *a*. Formally, the grammatical number of NP's determined by GEN *a* is singular, and conceptually, GEN *a* determines an NP to qualify as an expression compatible only with predicates that attribute properties available for singular entities. The latter interpretation has obvious affinities with the conceptual unity that a singular predicate nominal carries as an expression of a property. COP *a* and GEN *a* have the singularity of a property in common. I will account for the genericity effected by GEN *a* in terms of a metonymic relation between GEN *a* and COP *a*.

I have argued that a singular predicate nominal expresses an abstract property and that its singularity is a reflex of the conceptual unity. Indeed, this characterization is valid as far as a predicate nominal is singular in grammatical number. The contrast in (35) corroborates this argument.

(35) a. To be a whale is to be a mammal.
b. *To be whales is to be mammals.

Infinitive structures with a predicate nominal, which Burton-Roberts takes to be the source of GEN *a*, are legitimate when they consist of a singular predicate nominal. This contrast lends credence to the idea that this structure

embodies a conceptual unity of a property. The contrast also suggests that plural predicate nominals are not conceptual expressions. We will see this suggestion is exactly borne out when we examine the contrast between a singular and a plural predicate nominal in Section 4. Since it lacks the existential quantificational force, it is impossible for a predicate nominal to pick out what it stands for. Referring expressions like *that* are barred from the infinitive structures, because there is nothing to refer to.

(36) a. That man is male.

b. *To be that man is to be male. (Burton-Roberts 1977:168)

Notice that the sentence in (36a) is not a generic sentence.

These considerations adduced thus far suffice to establish that it is indeed plausible to seek a common core of COP *a* and GEN *a* with respect to the expression of a property rather than a referent. The claim advanced by Burton-Roberts deserves serious reconsideration in this respect. She was wrong in confusing GEN *a* with COP *a*, but her strategy was, I think, to capture the essential core between the two uses. Instead of relating GEN *a* to COP *a* derivationally, we should explore a grammatical device that interprets them on a common semantic basis. I will propose to analyze GEN *a* and COP *a* in terms of the singularity of a property.

We can see that the singularity of COP *a* and that of +SPEC *a* are different in essential respects. Both are singular in grammatical number, but COP *a* does not count a referent. Consider the following sentences:

(37) a. Bill is a boy.

b. George is a boy.

c. Bill and George are (??two) boys.

Plural predicate nominals do not amount to two even when they describe two referents. Recall that COP *a* cannot be reduced to *one*. COP *a* and GEN *a* share the singularity that follows not from the specific number of one, but rather from the conceptual unity of a property.

Predicate nominals do not basically carry a hint of cardinal numbers, but they do exhibit grammatical properties related to the singular/plural contrast.[4] The number concord of PR sentences will be argued in detail in Section 4. It should be pointed out in advance that plural predicate nominals are not plural in that they do not pick out plural referents. This state of affairs is easily intelligible in cases like (38b), where the singular pronoun *it* succeeds in referring back to the plural predicate nominal *bachelors* in the same way as it

refers back to the singular predicate nominal in (38a):

(38) a. He is a bachelor, and he looks it.

b. They are bachelors, and they look it. (Seppänen 1984:103)

Or to put it more precisely, it is not anaphoric to the plural NP itself, but rather to their status as bachelors described by the NP.

3.4 Metonymy: an interpretive device shared by GEN a *and COP* a

To summarize what we have argued so far, we can say that in the case of NP's determined by GEN *a*, some 'referent' in its broad sense is assumed to be present, but in the case of NP's determined by COP *a*, there is no referent but a property. The presence or absence of the 'referent' is responsible for most of the differences between the two cases. But as the unacceptability of (17b) indicates, the 'referent' of GEN *a* is by no means the same as the referent of +SPEC *a*. It does not exist in the spatio-temporal frames. It is to be observed that NP's determined by GEN *a* are barred from the locational *there*-sentence.

(39) a. A drug addict is in trouble in Kansas.

b. There is a drug addict in trouble in Kansas.

Reed 1975:20 says of the sentences in (39) that (39a) "can mean that Kansas gives any drug addict a hard time," but no such interpretation is available in (39b). (39b) is rather concerned with a particular drug addict in Kansas.

That GEN *a* is excluded from locational *there*-sentences suggests that the 'referent' of GEN *a* is not located in a particular place. Rather, it is reasonable to consider that it talks about something that may not exist at all but is only assumed to exist conceptually. To put it simply, this is the image of a referent, and not a referent itself. I will demonstrate that by saying that NP's determined by GEN *a* talk about an image, we can clearly understand the relation between GEN *a* and COP *a*. The argument for the 'reference' to an image is based on the simple idea that an image can never be described by the presence or absence of a corresponding referent, but can be appropriately described by a corresponding property that inheres in that image.

Before I discuss the image in detail, I must clarify the role of COP *a* in interpreting a given NP, because the property denoted by a predicate nominal is directly relevant to creating an image. Consider the following sentence:

(40) He is an Edison.

Why this sentence is interpreted as it is? He is not Edison, of course, but he is an Edison. As far as his identity is concerned, the sentence may be counterfactual, but it succeeds in conveying what it means by the use of COP *a*.

It is readily apparent that in this context COP *a* determines the proper noun Edison not as a referring expression but as an expression to denote a property. This fact, together with what we have seen thus far, illustrates the semantic contribution that COP *a* makes, yielding the statement in (41):

(41) COP *a* has the function of defining a property.

Furthermore, metonymy is involved in defining the property of being an Edison. To denote the property that Edison had or was assumed to have, one can substitute the owner of the property for the property. This fact shows that a property expression is compatible with the interpretive device of metonymy.

We are now in a position to propose the principle that captures the core of GEN *a* and COP *a*. GEN *a* and COP *a* are quite similar, but not identical. GEN *a*, unlike COP *a*, is assumed to have some 'referent.' Why do they pattern in similar ways, but differ in some basic respects? The paraphrase relation in (42) seems to provide the key to the answer:

(42) a. A lion has a bushy tail.

b. If something is a lion, it has a bushy tail. (Krifka et al. 1995:49)

This paraphrase makes sense only if GEN *a* has no referential presupposition in the universe of discourse in which the utterance of (42a) is relevant. The reason is that if it had, the conditional clause in (42b) would have to apply to a particular lion alone. This is quite opposite to the fact.

Roughly speaking, metonymy takes place in the interpretation of (42a). Instead of predicating the property of having a bushy tail of something called a lion, the sentence predicates that property of the property of being a lion. Strictly speaking, however, this is not entirely correct. The NP *a lion* in (42a) does not express just the property of being a lion. As I have just said, it talks about the image of a lion. What then is an image? The meaning of 'image' intended in this paper is defined as follows:

(43) An image of an entity is the instantiation of the essential property of the entity.

Although an image as defined in (43) will never refer to a particular object perceptually or textually, it has a fixed content which is shared by the people composing a speech community. In other words, the image is identifiable. Recall that NP's determined by GEN *a* are compatible with nonrestrictive relative clauses, as shown in (29), because they are identifiable conceptually.

When we talk about generic sentences like (42a), for example, we 'refer to' an image of a lion. But the 'reference to' an image is by no means the same

as the reference to a referent, as the preceding discussion has shown. We do not refer to an image: actually, we imagine it. The considerations adduced thus far justify the interpretation of GEN *a*, as stated in (44):

(44) Imagining an essential property stands metonymically for imagining the image that instantiates it.

NP's determined by GEN *a* are metonymic in the specific sense that they create an image of an entity by substituting a (defining) property of the entity for a particular case of the entity. There are various lions ($lion_1$, $lion_2$, $lion_3$,... $lion_n$), and each of the lions has the property of being a lion. An important point emerges. NP's determined by GEN *a* serve to substitute the property for the reference to each lion to build up the image *lion*. COP *a* and GEN *a* have in common the capacity to invoke a concept metonymically. We can reduce the relation of GEN *a* to COP *a* to a general interpretive principle of metonymy, and then there is no need to postulate a syntactic transformation to relate them.

Evidence for this interpretation depends on the existence of counterfactual statements in which GEN *a* contrasts with quantifiers like *every* and *any*.

(45) {A/?Every/?Any} perceptual-motion machine runs forever.
(Nunberg & Pan 1975:415)

Quantifiers like *every* and *any* are excluded from sentences that talk about a hypothetical entity that has no presupposition of existence. GEN *a* is not a quantifier, however, and is suited perfectly well to create an image of such an entity. COP *a* does not alternate with quantifiers like *every*, either.

(46) *John is every member of the club. (Doron 1988:297)

Quantifiers like *every* cannot normally quantify over a predicate nominal. Since a predicate nominal denotes a property and carries no referential presupposition, there is nothing to quantify over with respect to it.[5]

NP's determined by GEN *a* talk about an image rather than a referent. They are not falsifiable by the presence of exceptions. GEN *a* and *any* differ in this respect. Generic sentences with GEN *a* are not falsifiable by the presence of exceptions or by the counterfactual content of a sentence, but in sentences with *any* counterfactual contents yield an unacceptability, as in (47):

(47) a. A dog can grow to the height of a yard.
b. ?Any dog can grow to the height of a yard. (Seppänen 1982:44)

There are exceptions to the statement that dogs can grow to the height of a yard, and therefore it is factually inappropriate to say that this applies to any dog. But this does not matter at all with NP's determined by GEN *a*, since it

talks about the image of a dog rather than a concrete dog. Image and reality do not match.

We thus suppose that the interpretation of GEN *a* is best stated in terms of the metonymy that operates on COP *a*. I will borrow the term *telescoping* from McCawley 1979 to describe the process of metonymy.[6] Since a property is the requirement for creating an image, the statement in (48) follows:

(48) COP *a* is telescoped into GEN *a*.

GEN *a* is distinguished from COP *a* by a conditional mood specifically imposed on it, as the paraphrase in (42b) suggests. While COP *a* determines an NP as an expression of a property, GEN *a* determines an NP to create an image that instantiates the property under the condition that descriptive contents be essential to the property metonymically invoked. I will show in the next subsection how this condition works in relation to tautologies.

3.5 Tautologies

I now take up the general issue of genericity concerning the difference between bare plurals and NP's determined by GEN *a*. 'Generic' statements produced by bare plurals are semantically different from indefinite generic sentences. Tautological copular sentences are directly relevant to our present concern. An examination of the difference in meaning between the singular and the plural tautology offers further evidence in favor of our claim that GEN *a* has the capacity to express an image rather than a referent.

Wierzbicka 1987 argues convincingly that there are clear differences in meaning between tautologies consisting of bare plurals and those consisting of NP's determined by the indefinite article.

(49) a. Boys will be boys./*A boy will be a boy.
b. A bet is a bet./?*Bets are bets.

Wierzbicka 1987:106 says of plural cases like (49a) that they encode a meaning that can be spelled out as follows: everyone knows that people of this kind do some things that one would want people not to do. In other words, they are designed to express tolerance for the human nature. Since such a kind-hearted attitude as tolerance is clearly a product of experience, one can reasonably suppose that experience has much to do with the meaning of plural tautologies. Wierzbicka 1987:107-108 says of singular cases like (49b) that they encode a meaning that can be spelled out as follows: everyone knows that there are some things that all people have to do about X. This means that they are designed to express obligation. I claim that what I have argued about the nature of GEN *a*

has much to do with the difference in interpretation that Wierzbicka offers.

There is now a much-discussed contrast between an indefinite generic sentence and a bare plural sentence, namely the contrast in (50):

(50) a. A madrigal is polyphonic.
b. *A madrigal is popular. (Lawler 1973:112)
c. Madrigals are popular. (Nunberg & Pan 1975:417)

An indefinite generic expresses something essential to the image in question (cf. Lawler 1973:Ch.4, Platteau 1980). Being polyphonic is essential to the definition of a madrigal, and therefore the sentences in (50a) is impeccable as a generic sentence. However, the accidental property of being popular cannot be predicated of the image of a madrigal as a generic property. It is important that one can describe madrigals as being popular on the basis of a statistical or inductive generalization. Extending this contrast to plural tautologies, one can say that an empirical sense of tolerance of the sort that (49a) conveys comes from the inductive generalization effected by bare plurals. One cannot reach mental maturity to tolerate a boy's behavior on the basis of a single experience. The singular version of (49a) is odd for this reason. The generic reading of bare plurals is characterized as follows: referents or events of a similar kind precede a generalization.

'Generic' statements with bare plurals carry an inductive generalization, but generic sentences with GEN *a* talk about an image fixed to some entity without commitment to the empirical support for the image. To show this, consider the contrast between (51) and (52), in which 'generic' statements with bare plural NP's are acceptable when they undergo a temporal restriction by the progressive form and the adverb, but the generic sentence with GEN *a* does not accept such a restriction because it is not essential to the image in question:

(51) a. Cats stalk birds.
b. Cats are being born with extra toes these days.
(52) a. A cat stalks a bird.
b. *A cat is being born with extra toes these days.

(Langacker 1996:289)

There may be cases where one can draw from observations the generalization to the effect that cats in general have such-and-such characteristics for a limited period of time, but an image of some entity is free from a temporal restriction. It is just like a law. It is fixed in content. In striking contrast to the 'generic' reading of bare plurals, the reading of NP's determined by GEN *a* goes as

follows: an image takes precedence over an actual situation.

To return to the topic of tautologies, we can now make sense of the difference in interpretation between singular and plural tautologies. Singular tautologies like *A promise is a promise* has a binding force precisely because an image like a promise precedes a situation and it prescribes the way it should be. Plural tautologies like *Promises are promises* have no comparable binding force, because their interpretation hinges on empirical observations where situations in the real world have precedence over an inductive generalization.

3.6 Summary

I have argued that a predicate nominal qualifies as an expression of a property independent of any referent. The singularity inherent in a property is the controlling factor in the parallelisms between COP *a* and GEN *a*. I have also argued that the parallelisms are best captured via the interpretive device of metonymy. We have focused on the predicate status of a predicate nominal, but this is not the whole story. Predicate nominals play the role of property expression in the light of predicate, but they play another role in the light of predication. I will argue that this change in grammatical status is best stated in terms of the change in grammatical number of predicate nominals.

4 Number Concord

In this section I will argue about the number concord of PR sentences. I have argued so far that a predicate nominal works as an expression of a property. I have dealt with it in its predicate status only and deliberately ignored its relation to the NP in subject position. In other words, the arguments so far have been concerned with the predicate, but not the predication. A property denoted by a predicate nominal should be independent of the number of referents that include it. We have called this independence conceptual unity.

One fact needs to be stressed: most of the copular sentences examined thus far have a singular NP in subject and a singular NP in complement position. This means that the correspondence of a referent and a property is one to one, and it presents no problem with respect to grammatical number. Problematic cases begin to arise when a copular sentence has a plural NP as its subject. Predicate nominals exhibit the singular/plural contrast apparently in accordance with the number of subject NP's, which is called number concord. Does the linguistic fact of number concord phenomena indicate that the

conceptual unity of a predicate nominal is just a trick which is designed to describe the relation between COP *a* and GEN *a*? No. In the rest of this paper I will argue about a mechanism that triggers the number concord. This means that the concord does not follow from a direct correspondence between a referent and a property, but rather it is motivated by a grammatical device related to predication relation. The argument for the device will make essential use of the idea that noun phrase reference has a layered structure in between a referent and a property.

4.1 Basic facts of asymmetrical concord

We will first observe that the number concord is of a notional, and not formal, nature. To see this, let us examine sentences in which the number concord is apparently violated. Examples include the following sentences:

(53) Ed and Kim are {an amiable pair/a nuisance/a good choice}.
(Huddleston 1984:187)

As far as the surface number is concerned, the sentences in (53) apparently violate the rule of number concord, as illustrated in (1). However, here is just a discrepancy between the singular form of *pair* and the dual notion intrinsic to *pair*. In the other cases, Ed and Kim are taken to form a unit, too. This is also true of inherently dual nouns like *couple*.

(54) a. *John is a couple.
b. John and Mary are a couple.
c. *John, Mary, and Bill are a couple. (Gleitman 1969:88)

We call concord phenomena like (53) and (54b) asymmetrical concord, and explore a grammatical mechanism that motivates concord of this sort.

The observation that the concord is of a notional nature is correct about subject NP's, too. When subject NP's contain nouns that are inherently plural, but singular in surface form, the verbal agreement is plural, and the predicate nominals are also plural. For example:

(55) a. A majority of the faculty are generative grammarians.
b. In the United States TV has produced a generation who become slaves to TV.

The NP *a majority of the faculty* is formally singular but notionally plural, because a faculty is composed of more than one member. The same applies to *generation*. These facts illustrate that the number concord in PR sentences is not formally motivated, but rather it is motivated notionally.[7]

Predicate nominals denote a property rather than a referent. One might

be tempted to argue that because they are non-referential, they depend on the subject NP for the grammatical number. One might say that a singular subject NP controls a singular predicate nominal and a plural subject NP a plural predicate nominal. This is exactly the case with the data in (1). However, this is not the whole story of the number concord, and the facts are not so simple. Singular predicate nominals are singular just because the property that they denote has a conceptual unity. This singularity is reflected in the singularity of COP *a*. So far, so good. Plural predicate nominals are problematic in any case. What is the motivation for the pluralization of a predicate nominal?

I argue that linguistic facts weigh in favor of an intermediate level between a referent and a property, and that the number concord is a function of the number of the intermediate level. Although the intermediate level is a theoretical construct without phonetic realization, I believe that its postulation is empirically sound and well motivated. Consider now the ambiguity inherent in plural NP's. Plural NP's are basically ambiguous in two ways. They constitute a set on the one hand, and they consist of individuals on the other. We have just seen that when plural NP's are described by a dual property like *couple*, their facet as a set comes to light. On what level then do we determine whether a given plural NP counts as a set or as individuals?

In this connection it is worth examining the following contrast, in which the set interpretation of plural NP's obtains by the help of an adjective.

(56) a. Deletion aside, root transformations, as studied in this chapter, are clearly a general preposing device which has in some case the effect...

b. *Root transformations are a device... (Itagaki 1971:118)

In (56a) the adjective *general* modifies the singular predicate nominal to produce the asymmetrical concord. Without the adjective, the sentence is unacceptable. Similar cases are found with the adjective *single*:

(57) Condition A and Condition B are in fact a *(single) condition.

Adjectives like *single* and *general* contribute to the set interpretation of plural NP's. They serve to highlight the singular interpretation of plural entities. In copular sentences like (57), the domain that adjectives like *single* restrict is not just a property described by a predicate nominal, but the singular interpretation of the referents of the subject NP's. These facts justify the role of an intermediate level in interpreting a given plural NP in subject position. Without such an intermediate level, moreover, (57) would be just a tautology,

for it is trivially true that Condition A is a condition and Condition B is a condition. The sentence conveys much more than a tautology could convey.

The difference between a predicate and a predication is now obvious. A predicate nominal as a predicate is an expression of a property, and is singular in number. In a predication, however, it is no more an expression of a property and gains a new role of an expression of the property of some referent(s). The identity of such a mechanism for distinguishing a predicate from a predication remains to be seen, but the concord phenomenon provides a justification for the proposal that in the intermediate level, a property expression is accommodated to the interpretation of the referent of subject NP's with respect to number. This process correlates with the change in number of a predicate nominal. Since predication is the integration of a concrete referent or a referent which is assumed to be concrete and an abstract property, the expression that is sensitive to the intermediate level of the integration should be characterized as being less concrete than a referent but less abstract than a property. I will argue that there are predicate nominals that exactly satisfy this characterization.

Sentences with a plural NP as their subject are a telling example for demonstrating the role of the intermediate level. Complement NP's after *seem* are relevant to our discussion. *Seem* takes an NP complement when it denotes gradation. Degree nouns like *genius* and *fool*, unlike classificatory nouns like *sailor*, denote an abstract property of gradation when they are determined by COP *a*. The contrast in (58) shows this.

(58) He seems {a genius/*a sailor}. (Bolinger 1972:78)

It is important to observe that even a noun like *fool* is unacceptable in this context when it is plural:

(59) a. The man seems a fool.
b. *The men seem fools. (Bolinger 1972:78)

This contrast between singular and plural becomes a nonproblem once we take into consideration the role of the intermediate level in pluralizing a predicate nominal. As the subject NP is interpreted as consisting of individuals, the intermediate level accommodates a predicate nominal to a plural expression. This is the time when a predicate nominal loses the original abstractness. As we have argued in Section 3, a predicate nominal carries an abstract property when it is singular. *Fools* in (59b), unlike *a fool* in (58a), does not denote an abstract property such as gradation, and they are ruled out. Recall that the

plural predicate nominal is excluded from the infinitive structure, as is evident from the unacceptability of (35b). Given the assumption that the infinitive is a grammatical reflex of an abstract property, then it follows that plural predicate nominals are not linguistic expressions proper to such an abstract property.[8]

4.2 The intermediate level in between a property and a referent

The data discussed above show that in between a referent and a property, there might be some intermediate level. Plural NP's have plural referents, but they may have a single property in common or each of them may have a property. The value of the intermediate level depends on the choice of these two alternatives. When the former interpretation comes to light, the intermediate level points to a singular value. A singular NP is chosen as a complement NP. When the latter interpretation comes to light, the intermediate level points to a plural value. A plural NP is chosen as a complement NP. In this way, the intermediate level serves to determine the number of predicate nominals. What then is the grammatical status of the intermediate level?

Free relative *what* is a candidate for the intermediate level. I claim that the role played by *what* in a copular sentence is successfully described if we locate what *what* stands for in the intermediate level between a referent and a property. To begin with, let us consider the following sentence.

(60) He is not what he was.

Why is this sentence not contradictory? Did the person in question change his identity in the past? No. The free relative in this sentence describes some property that he had, but that he does not have any more. Even a cursory glance at this example reveals that there is some kind of association between *what* and a predicate nominal. Based on the pioneering works by Nakau 1971, 1973, I proceed to discuss the range to which *what* in this construction corresponds. It will be shown that when *what* contains a predicate nominal, as in (60), the free relative is something less concrete in referentiality than a referent but it is less abstract in referentiality than a property. Arguments to the same effect hold for the free relative *what* that contains a subject NP. The kinship between *what* and a predicate nominal is instrumental in clarifying the mechanism behind number concord phenomena of PR sentences.

Our next concern is with the distinction between *what* and *who* that may be in line with the distinction between an inquiry about a property of a referent and an inquiry about an identity of a referent. Kuno 1970:350 illustrates this

distinction with the two sets of dialogues in (61) and (62):

(61) A: What is he?
B: He is a doctor.
B': *He is Mr. Jones.

(62) A: Who is he?
B: He is a doctor.
B': He is Mr. Jones.

While *who* can form both kinds of inquiry, *what* forms only an inquiry about a property described by a predicate nominal. We might infer that what *what* stands for in contexts like (60) and (61) is coextensive with a property rather than a referent. The following contrast argues for this characterization:

(63) What Bill is is {a fool/*Mr. Smith}. (Doron 1988:287)

In pseudo-cleft sentences with *what* like (63), the focused expression is a property expression rather than something referring to a particular individual.[9]

It is easy to see from these contexts that *what* asks a property and not an identity of a referent and conclude that *what* is a property-asking *wh*-item. This is, however, a hasty conclusion and must be modified. In fact what *what* asks is not simply a property itself, but rather an intermediate level that is less concrete than a referent but nonetheless less abstract than a property. To repeat the main thesis of the discussion, noun phrase reference has a range of intermediate level in between the outside face of referent and the inside heart of property. The number concord is relevant to this intermediate level.

Evidence for this characterization of *what* comes from the interpretation of a copular sentence with two free relatives. Williams 1990:448 observes that the sentence in (64) is four ways ambiguous:

(64) What John is is what Mary is.

The readings are (i) a predicational reading in which John is asserted to have the property Mary has, (ii) a predicational reading in which Mary is asserted to have the property John has, (iii) an equational reading in which the property or some property John has is asserted to be the same as the property Mary has, and (iv) an equational reading in which being a property of John is asserted to be the same as being a property of Mary. What is most important in Williams' observation is that free-relative *what* ranges from being a property of a particular person to the property that the person has. This is clear from the difference between (iii) and (iv).

Whatever factors may ultimately be responsible for these readings, it is

necessary for us to think why the sentence means what it is supposed to mean. The obvious answer is that the sentence is semantically meaningful just because the two free relatives express semantically different things. If *what* would stand simply for a property, then there would be no reason to exclude the possibility that the sentence allows a tautological reading like *A teacher is a teacher* under the condition that both John and Mary are teachers. But this is not the case. An important corollary of this line of reasoning is that what John is is something less concrete in referentiality than the expression that refers to a particular person like John, but it is less abstract in referentiality than the expression that denotes a property. *What* ranges from the less concrete to the less abstract. It is intermediate in this sense.

Williams 1990:488 further notes on that sentence that it never allows the identity reading in (65):

(65) John is Mary.

This fact suggests that the expression *what John is* is less concrete than the expression that refers to a particular person. All these data lead us to conclude that what *what* stands for in this construction lies in between a referent and a property. This conclusion has interesting implications for the grammatical mechanism that is supposed to govern the number concord of PR sentences. The idea at the core of this argument is that noun phrase reference has a layered structure in itself which ranges from a property to a referent, and there is an intermediate level in between the two which is sensitive to the number concord. The ambiguities inherent in the free-relative make sense if, as we have argued, *what* corresponds to some layer(s) in between a property and a referent.

We have so far been concerned with free relatives in which *what* contains a predicate nominal. On the other hand, there are free relatives in which *what* contains the subject NP of PR sentences. As Nakau 1971, 1973 argues in detail, what *what* expresses in this construction cannot be described by a lexical item. The sentence in (66a) is unacceptable when *what* is replaced by a lexical item that has a referent in its own right.[10]

(66) a. Lakoff has made what appears to be a radically new proposal.
b. *Lakoff has made {the thing/a thing/something} which appears to be a radically new proposal. (Nakau 1971:12)

I have claimed that noun phrase reference has a layered structure and that there is some layer in between a property and a referent. The contrast in (67) is

quite suggestive of the intermediate character of what *what* expresses.

(67) a. John baked what is supposed to be a pie, but it is not a pie at all.
b. *John baked a pie which is supposed to be a pie, but it is not a pie at all. (Nakau 1973:127)

What *what* stands for in (67a) rejects the paraphrase with an NP that has its own referent, and therefore it is reasonable to argue that it is less concrete in referentiality than the expression that picks out a referent of a pie.

Most importantly, free relative *what* in this construction has the capacity to control the number agreement of the predicate verb.

(68) What are known as Acoustic changes {occur/*occurs} chiefly in foreign words. (Kjellmer 1984:266)

This fact is interpreted as meaning that the intermediate level to which the free relative corresponds lacks the capacity to refer to a concrete entity, but it carries information about grammatical number. We have seen in 4.1 that the pluralization of a predicate nominal is sensitive to the intermediate level at which the plural NP in subject position is interpreted as consisting of individuals rather than constituting a set. We can thus conclude that the level at which reference is made to the grammatical number of some referent, but not to the referent itself is operative on the predication relation in which a referent and a property are integrated into a sentence.

The overall claim of this argument is that the number concord of PR sentences is sensitive to the intermediate level that lies in between a referring expression that picks out a referent and a conceptual expression that denotes a property. The exact nature of the level in question remains to be seen, but the purpose of the present discussion has been to demonstrate that noun phrase reference has a layered structure including a level which carries information about grammatical number but does not refer to a particular entity, and that this level is necessary for describing the concord phenomena properly.

5 Conclusion

A few concluding remarks are in order. I have argued that the indefinite article is heterogeneous in nature and that COP *a*, unlike +/-SPEC *a*, serves to define a property. The singularity of a predicate nominal is the singularity of a property guaranteed by COP *a*. I proposed that the relation between COP *a* and GEN *a* should be captured in terms of metonymy. Based on this, we characterized the indefinite generic sentence as a sentence about an image. As

the differences between indefinite generics and 'generics' made by bare plurals have shown, the genericity is not a homogeneous phenomenon, and contains several heterogeneous elements. I have avoided reference to the definite generic sentence, but I think it is profitable to capture the nature of 'GEN *the*' if any in relation to other uses of the definite article, as I have proposed to relate COP *a* to GEN *a* by metonymy. I then shifted the focus of the argument to the role of a predicate nominal in predication, paying close attention to its number. The number concord of PR sentences has much to do with the layered structure of noun phrase reference. I have suggested that the number concord be analyzed in terms of an intermediate level of the layered structure. The intermediate level as it is developed in this paper is still just a hypothetical construct. To become compelling, this hypothesis will have to pass a number of tests that properly discriminate singular and plural NP's, NP's with and without relative clauses, the differences among *which*, *who*, and *what*, pronouns and deictic expressions, and so on and so forth. All these topics and their ramifications must be relegated to further study. This is the first step toward such enterprises.

Notes

* This paper grew out of the joint research presented at the 17th annual meeting of Tsukuba English Linguistics Society on October 26, 1996 under the title "A semantic approach to the modal auxiliaries in English: a case study of *must*." That gave me the opportunity to learn much about a close link between a predicate nominal and an indefinite singular generic NP. My thanks go to Joe Morita, Yuji Tanaka, Katsuo Ichinohe, Akiko Miyata, and Keiko Sugiyama, who have read the earlier versions of this paper. This paper has improved a lot from their comments and suggestions. I am much indebted to Gream Spafford and Robyne Tiedeman, who have patiently acted as informants. I am grateful to all the fellow students majoring in English Linguistics for allowing me to use the Macintosh computer for writing this paper. Of course, all remaining inadequacies are my own.

[1] Proponents of the 'meaningless' analysis might say that European languages like German do not employ indefinite articles for predicate nominals, and they would attribute the absence of the article to the lack of meaning. German predicate nominals usually do not employ the indefinite article *ein*, but the facts are not so simple. Consider the following contrast:

(i) Leonie ist (*eine) Witwe.
L. is (a) widow
(ii) Klaus ist *(ein) Grobian.
K. is (a) bastard (Heidolph et al. 1981:251-252)

The indefinite article is excluded when the predicate nominal functions as a classificatory description, but it is required to occur when it functions as an epithet. This contrast agrees with the distinction between a classificatory noun like *sailor* and a degree noun like *genius*, as shown in (58). Observe:

(iii) a. Er ist Schauspieler. Er ist Schauspieler von Beruf.
He is actor He is actor by occupation
b. Er ist ein Schauspieler. Er verhält sich wie ein Schauspieler.
He is an actor He behaves himself as an actor
(Helbig & Buscha 1979:337)

The article has the capacity to determine an NP as an epithet predicate nominal. *Schauspieler* in (iiib) is an epithet rather than a noun that classifies an occupation. Although space, let alone my ability, prevents full documentation, these facts illustrate that there is no syntactic rule to exclude the indefinite article from German predicate nominals, but a semantic differentiation between predicate nominals without article and those with article. The indefinite article is not meaningless when it occurs with a predicate nominal.

[2] Takeda 1981, partly based on Takeda 1977, is a valuable study of indefinite NP's. Takeda is primarily concerned with the specific use of the indefinite article and only secondarily with the descriptive use, which includes both COP *a* and GEN *a*. I agree with him that indefinite NP's are divided into three types: specific, non-specific, and descriptive. I further agree with him that a proper distinction should be made between non-specific and descriptive NP's. I take issue with his claim that the indefinite article in the descriptive type functions as merely a singular marker. The meaning that he assumes to be at the core of the indefinite article is existential quantification, and the 'meaningless' analysis of COP *a* is a natural corollary of this assumption.

Following Takeda 1981:32 I assume specificity to be defined as follows:

(i) An indefinite noun phrase is specific for a person if by its use the speaker refers to a particular object or individual such that the person has it or him in mind.... an indefinite noun phrase is non-specific for a person if by its use the speaker does not refer to any particular object or individual such that the person has it or him in mind.

On the basis of this definition, Takeda takes -SPEC *a* as well as +SPEC *a* to be a kind of existential quantifier. Consider the following sentence:

(ii) John wants to catch a fish.

This sentence is ambiguous between the reading of (iiia) and that of (iiib):

(iii) a. There is a fish such that John wants to catch it.
b. John wants there to be a fish such that he catches it.
(Takeda 1977:34)

+SPEC *a* goes with (iiia) and -SPEC *a* goes with (iiib). There is a difference between the two cases with respect to the mental state of the speaker at the time of the utterance, but it is obvious that in both cases the indefinite article functions as existential quantifier. -SPEC *a* presupposes the existence of a referent, though not specific at the time of the utterance, that satisfies the description of the NP in question. This distinguishes +/-SPEC a from COP *a*.

-SPEC *a*, however, shares some grammatical properties with COP *a*, despite the fact that they differ with respect to existential quantification. Like NP's determined by COP *a*, NP's determined by -SPEC *a* are incompatible with nonrestrictive relative clauses that refer to a particular individual:

(iv) *A man, who comes to John's party, sneezes.

In this paper I have been concerned only with free relatives and pseudo-clefts consisting of copular sentences. In other cases *what* in pseudo-clefts corresponds to an NP determined by -SPEC *a* rather than +SPEC *a*, as in (v):

(v) a. *What I married was a medical doctor. [+SPEC *a*]
b. What I wanted to marry was a medical doctor. [-SPEC *a*]
(Kuno 1970:362)

The kinship between *what* and -SPEC *a* is helpful to disambiguate the sentence in (vi). The pseudo-cleft sentence with *what* allows only a non-specific reading, but the pseudo-cleft sentence with *the one who* allows a specific reading:

(vi) John wanted to marry a Norwegian.

(vii) a. What John wanted to marry a Norwegian. She {*has/should have} long hair.
b. The one who John wants to marry is a Norwegian. She has long hair. (Prince 1978:885)

COP *a* and -SPEC *a* differ in existential quantification, but these phenomena illustrate that they share a range of grammatical properties for some reason.

[3] I put the word *generic* in quotations when it applies to bare plural NP's.

As is argued in Section 3, there are qualitative differences between NP's determined by GEN *a* and bare plural NP's. Burton-Roberts 1977 suggests that bare plurals should be regarded as plural counterparts of NP's determined by -SPEC *a* and they do not convey the generic meaning in the strict sense of the word *generic*. I do not go into the details, but it is evident that one cannot relate a plural predicate nominal to a bare plural in the same way as I relate a singular predicate nominal to an NP determined by GEN *a*.

[4] There are copular sentences in which numerals are allowed to occur in this environment with the condition that they be unstressed. For example:

(i) a. They are six DOCtors.
b. *They are SIX doctors. (Perlmutter 1970:239)

It is unclear under what condition this marked occurrence of numerals is allowed. Although I have no idea on their grammatical status, there are copular sentences in which *one* occurs with an NP in complement position:

(ii) Generic sentences with the indefinite article are only one form of generic sentences in English.

I have to leave the question of these sentences open in this paper.

[5] *Every* in the form of *everything* will appear as a complement NP when it means 'the most important thing' or when it is restricted by a relative clause:

(i) a. I love him. He is everything to me.
b. This is everything I have.

Doron 1988:298 takes these occurrences of *everything* to be exceptional. The precise description of the word must await further research.

[6] *Telescoping* is the name given by McCawley 1979 to the phenomena observed in (i) and (ii), in which the interpretation of NP's in complement position is equivalent to that of the clausal forms.

(i) a. It's amazing the books that John has read.
b. It's amazing that John has read the books that he has read.
(ii) a. I am happy about what Nixon did.
b. I am happy about Nixon's doing what Nixon did.

McCawley conceived of telescoping as a kind of deletion rule, but it is clearly a mistake. There is no syntactic argument for the recoverability. Rather the interpretation of these NP's should be brought about metonymically in a marked mood such as exclamative. The interpretation of an NP correlates with a marked linguistic mood. It seems highly plausible that an indefinite generic forms a mood which is similar to or a subpart of a conditional mood.

The precise formulation of telescoping is difficult at present, but there are a number of phenomena that fall within the purview of telescoping. Concealed questions are most commonly cited instances of telescoping. They are NP's in category, but they count as interrogative sentences in interpretation. In a similar way, indefinite generic NP's are NP's in category, but, as I have argued in this paper, their interpretation requires that they be included in predicates.

[7] There are copular sentences of the type which is not dealt with in this paper. The sentences below are of the form $NP_{(sg.)}$ *is* $NP_{(pl.)}$:

(i) I realized that a well-expressed poem is not more than just pretty words.

(ii) A school is three things in one: teacher, student, and parents.

In these cases, the singular NP in subject position is an entity that consists of a complex body of elements. I do not know at present whether they are PR sentences or other types of copular sentences such as specificational sentences.

[8] Some predicate nominals occur without articles even when there is no hint of uniqueness or distinctiveness for the role described by the NP in question. One such example is *fall (a) victim. A* is optional in the singular case:

(i) He fell a victim to the strange disease.

The predicate nominal does not exhibit the number concord.

(ii) They fell {victim/*victims} to a lovers' quarrel.

(Leech & Li 1995:192)

Similar remarks apply to idiomatic expressions like *fall (a) prey to.* It is not clear at present how these facts can be handled, but the lack of plurals suggests that these nominals are similar to degree predicate nominals like *(seem) a fool.*

[9] Proper names are very often referring expressions and referring expressions are barred from predicate nominals. Free relatives consisting of copular sentences may contain proper names in predicative position.

(i) Outside what was once the Hotel Majestic, black sedans swung to a stop.

(ii) Sheik Mujibur Rahman, the undisputed political leader of what was once East Pakistan, ... (Nakau 1973:120)

As the compatibility with *once* suggests, the entities described by *what* have undergone a change in status. Such a change, however, does not occur in referring expressions. *Who* and *what* differ in that *who* picks out a particular person, but *what* does not. *What* can describe an entity that undergoes a change in status, but *who* cannot. The following contrast shows this:

(iii) {What/*Who} did she become? (Declerck 1988:57)

These facts lead one to say that the proper names above are not referring expressions, but they express names, as in *a country called East Pakistan.*

[10] As Nakau 1971 points out, the free relatives may accept a paraphrase in which a noun in the predicate nominal is copied into a subject NP, as in (i):

(i) a. Lakoff has made {what/a proposal which} appears to be a radically new proposal.

b. Along these lines, a number of facts fall together in {what/a way which} seems a quite natural way.

It is important to notice that this style of paraphrase does not always work, as the sentences in (67) exemplify. The paraphrase may deserve examining in the light of the layered structure of noun phrase reference developed in this paper.

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